

Course Outline of Record

1. Course Code: ACT-025
2.
 - a. Long Course Title: Thermal and Moisture Protection
 - b. Short Course Title: THERML/MOIST PROTECT
3.
 - a. Catalog Course Description:

This course covers the fundamentals of thermal insulation and vapor barriers for building structures. Topics include requirements and characteristics of certain insulation and waterproofing. Hands-on application and proper installation of these materials are demonstrated by certified installers.
 - b. Class Schedule Course Description:

This course covers the fundamentals of thermal insulation and vapor barriers for building structures.
 - c. Semester Cycle (if applicable): Fall
 - d. Name of Approved Program(s):
 - CONSTRUCTION MANAGEMENT Certificate of Achievement
4. Total Units: 1.00 Total Semester Hrs: 36.00
 Lecture Units: 0.5 Semester Lecture Hrs: 9.00
 Lab Units: 0.5 Semester Lab Hrs: 27.00
 Class Size Maximum: 20 Allow Audit: No
 Repeatability No Repeats Allowed
 Justification 0
5. Prerequisite or Corequisite Courses or Advisories:

Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm1-A)

 Prerequisite: CM 020 or
 Prerequisite: ACT 020
6. Textbooks, Required Reading or Software: (List in APA or MLA format.)
 - a. National Center for Construction Education and Research (2017). *Carpentry Framing and Finishing, Level Two* (5th/e). Gainesville, FL Pearson . ISBN: 0133404307
 College Level: Yes
 Flesch-Kincaid reading level: 12
7. Entrance Skills: *Before entering the course students must be able:*
 - a. Discuss common safety hazards on construction sites.
 - CM 020 - Discuss common safety hazards on construction sites
 - b. Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.
 - ACT 020 - Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.
 - c. Identify various hand tools used in the construction industry.
 - CM 020 - Identify various hand tools used in the construction industry
 - d. Identify various power tools used in the construction industry.
 - CM 020 - Identify various power tools used in the construction industry
 - e. Understand the impact of construction to the environment.
 - ACT 020 - Understand the impact of construction to the environment.
 - f. Demonstrate fluency reading a tape measure.
 - ACT 020 - Demonstrate fluency reading a tape measure.
 - g. Demonstrate the ability to interpret information and instructions presented in both written and verbal form.
 - CM 020 - Demonstrate the ability to interpret information and instructions presented in both written and verbal form

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h. Demonstrate critical thinking skills and the ability to solve problems using those skills.

- CM 020 - Demonstrate critical thinking skills and the ability to solve problems using those skills

i. Demonstrate effective relationship skills with teammates and supervisors, the ability to work on a team, and appropriate leadership skills.

- CM 020 - Demonstrate effective relationship skills with teammates and supervisors, the ability to work on a team, and appropriate leadership skills

j. Understand workplace issues such as sexual harassment, stress, and substance abuse.

- ACT 020 - Understand workplace issues such as sexual harassment, stress, and substance abuse.

8. Course Content and Scope:

Lecture:

1. Overview of industry
2. Thermal insulation
3. Insulation installation guidelines
4. Moisture control
5. Waterproofing
6. Air infiltration control

Lab: *(if the "Lab Hours" is greater than zero this is required)*

1. Install selected insulation materials
2. Install selected vapor barriers
3. Install selected building wraps

9. Course Student Learning Outcomes:

1.
Outline the characteristics and requirements of various types of insulation material. (Cognitive)
2.
Explain the procedure for installing selected thermal insulation and vapor barrier on a simple structure. (Cognitive)
3.
Demonstrate air infiltration control requirements. (Psychomotor)

10. Course Objectives: *Upon completion of this course, students will be able to:*

- a. Describe requirements for thermal insulation.
- b. Describe the characteristics of various types of insulation material.
- c. Determine the required amounts of insulation for a structure.
- d. Explain the proper procedure for installing selected insulation materials.
- e. Describe the requirements for moisture control and ventilation.
- f. Explain the proper procedure for installing selected vapor barriers.
- g. Describe air infiltration control requirements.
- h. Explain the proper procedure for installing selected building wraps.

11. Methods of Instruction: *(Integration: Elements should validate parallel course outline elements)*

- a. Activity
- b. Collaborative/Team
- c. Demonstration, Repetition/Practice
- d. Discussion
- e. Lecture
- f. Observation

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g. Participation

Other Methods:

Office and site visits

12. Assignments: *(List samples of specific activities/assignments students are expected to complete both in and outside of class.)*

In Class Hours: 36.00

Outside Class Hours: 18.00

a. In-class Assignments

1. Individual projects
2. Small group projects

b. Out-of-class Assignments

1. Review questions
2. Vocabulary terms
3. Short response papers

13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*

- Written homework
- Group activity participation/observation
- Student participation/contribution
- Other

Quizzes In-class exercises Participation during office and site visits

14. Methods of Evaluating: Additional Assessment Information:

15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*

PO - Career and Technical Education

Apply critical thinking skills to execute daily duties in their area of employment.

Display the skills and aptitude necessary to pass certification exams in their field.

IO - Personal and Professional Development

Develop realistic goals.

Demonstrate an understanding of ethical issues to make sound judgments and decisions.

16. Comparable Transfer Course

University System

Campus

Course Number

Course Title

Catalog Year

17. Special Materials and/or Equipment Required of Students:

18. Materials Fees: Required Material?

Material or Item

Cost Per Unit

Total Cost

19. Provide Reasons for the Substantial Modifications or New Course:

Periodic Course Review

20. a. Cross-Listed Course *(Enter Course Code):* N/A

b. Replacement Course *(Enter original Course Code):* N/A

21. Grading Method *(choose one):* Letter Grade Only

22. MIS Course Data Elements

a. Course Control Number [CB00]: CCC000513178

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- b. T.O.P. Code [CB03]: 95700.00 - Civil and Construction Ma
- c. Credit Status [CB04]: D - Credit - Degree Applicable
- d. Course Transfer Status [CB05]: C = Non-Transferable
- e. Basic Skills Status [CB08]: 2N = Not basic skills course
- f. Vocational Status [CB09]: Clearly Occupational
- g. Course Classification [CB11]: Y - Credit Course
- h. Special Class Status [CB13]: N - Not Special
- i. Course CAN Code [CB14]: N/A
- j. Course Prior to College Level [CB21]: Y = Not Applicable
- k. Course Noncredit Category [CB22]: Y - Not Applicable
- l. Funding Agency Category [CB23]: Y = Not Applicable
- m. Program Status [CB24]: 2 = Stand-alone

Name of Approved Program (if program-applicable): CONSTRUCTION MANAGEMENT

Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)

23. Enrollment - Estimate Enrollment

First Year: 20

Third Year: 20

24. Resources - Faculty - Discipline and Other Qualifications:

a. Sufficient Faculty Resources: Yes

b. If No, list number of FTE needed to offer this course: N/A

25. Additional Equipment and/or Supplies Needed and Source of Funding.

N/A

26. Additional Construction or Modification of Existing Classroom Space Needed. (Explain:)

N/A

27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES

Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Donbert M. Bitanga Origination Date 04/22/18